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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,854	12/20/2001	Shijian Li	AMAT/5765/CMP/CMP/RKK	1816
32588	7590	09/22/2005	EXAMINER	
APPLIED MATERIALS, INC. 2881 SCOTT BLVD. M/S 2061 SANTA CLARA, CA 95050			GRANT, ALVIN J	
			ART UNIT	PAPER NUMBER
			3723	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,854

Applicant(s)

LI ET AL.

Examiner

Alvin J. Grant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/27/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-59, 61, 62 and 67-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-59, 61, 62 and 67-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/1/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 39-43, 45-50, 52-59, 61, 62, 67-69 and 71-76 are rejected under 35 U.S.C. 102(b) as being anticipated by Breivogel et al. '064.

Breivogel et al. discloses an article of manufacture for polishing a substrate comprising a polishing article having a center portion and a perimeter portion, a polishing surface defined on the center portion, a plurality of perforations formed in at least a portion of the center portion of the polishing article for flow of material therethrough, a plurality of grooves disposed in the polishing surface, and wherein the center portion of the polishing article conducts electricity across the polishing surface; at least one of the plurality of perforations intersects with at least one of the plurality of grooves on the polishing surface (Fig. 6A); each of the perforations has a diameter of between about 0.16 and about 0.5 inches and are disposed between about 0.1 and about 1.0 inch from one another (column 6, lines 31-41); The center portion of the polishing article comprises a conductive material or a dielectric material having conductive elements disposed therein (column 4, lines 31-34); the plurality of grooves form a pattern comprising substantially circular concentric grooves, an X-Y pattern, or a triangular pattern

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on the polishing surface (Fig. 6A); the polishing article is disposed on a perforated sub-pad (Fig. 6A); the perforated sub-pad comprises a plurality of pores disposed therein for flow of material therethrough and the plurality of pores of the perforated sub-pad and the plurality of perforations in the polishing article are aligned for flow of material through the perforated sub-pad and the polishing article; the center portion of the polishing article comprises a dielectric material having conductive elements disposed therein, wherein the conductive elements are electrically connected to one another in the polishing article; and the perimeter portion of the polishing article conducts electricity across the upper surface of the perimeter portion of the polishing article; the perimeter portion of the polishing article comprises a dielectric material having conductive elements disposed therein, wherein the conductive elements are electrically connected to one another in the polishing article.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 44 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breivogel et al. in view of Osterheld et al. '855.

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Breivogel et al. is described above. Breivogel et al. does not specifically disclose the grooves being about 0.03-0.3 inches apart. Osterheld et al. discloses a polishing pad in which the grooves are about 0.03-0.3 inches apart so as to effectively convey the slurry. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the apparatus of Breivogel et al. to have grooves spaced) 0.03-0.3 inches apart as taught by Osterheld so as to effectively convey the slurry.

Response to Arguments

5. Applicant's arguments filed 6/27/05 have been fully considered but they are not persuasive.

In response to Applicant's argument that the slurry/pad/water of Breivogel et al. is not electrically conductive, polishing articles may be conductive. However, the slurry/water contained in the grooves are conductive and therefore will transport electricity across the pad.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin J. Grant whose telephone number is (571) 272-4484. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alvin J Grant
Patent Examiner
Art Unit 3723

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ajg

Lee D. Wilson
LEE D. WILSON
PRIMARY EXAMINER